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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/815,270 | 03/31/2004 | Nathan E. Marushak | 34455/33736.P18317 | 7484 |

| 7590 | 02/15/2006 |
|---|---|

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| EXAMINER |
|---|
| KING, JUSTIN |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2111 | |

DATE MAILED: 02/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/815,270 | MARUSHAK ET AL. |
| | Examiner | Art Unit |
| | Justin I. King | 2111 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>09 June 2005</u>.

2a)☐ This action is **FINAL.**     2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-27</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-27</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>6/9/05</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

2.      The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

> 1.      Determining the scope and contents of the prior art.
> 2.      Ascertaining the differences between the prior art and the claims at issue.
> 3.      Resolving the level of ordinary skill in the pertinent art.
> 4.      Considering objective evidence present in the application indicating obviousness or nonobviousness.

3.      Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the

combination of McNeill, Jr. et al. (U.S. Patent No. 5,499,378) and the standard disclosed SCSI

command.

Referring to claim 1: McNeill discloses a SCSI emulation device/target system, which is

equivalent to the claimed an expander device, capable of communicating with one or more

initiator engines and one or more target storage devices using a plurality of communication

protocols (column 3, 3$^{rd}$ paragraph).

McNeill discloses emulating the standard SCSI command (column 3, lines 23-27), but

McNeil does not explicitly disclose persistent reservation and persistent affiliation. Since the

persistent reservation is a standard SCSI command as disclosed in the Specification, one with

ordinary skill in the computer art will also implement McNeil's expander device to emulate the persistent reservation. And since McNeill's emulation device also connects the non-SCSI devices onto the SCSI network and translates the SCSI commands accordingly, McNeill's emulated SCSI commands on the non-SCSI devices are equivalent to the claimed persistent affiliation.

McNeill discloses connecting to non-SCSI device (column 3, line 18), and McNeill disclose the device as a serial magnetic disk (figure 2), which is equivalent to the claimed SATA storage.

Hence, it would have been obvious to one having ordinary skill in the computer art at the time Applicant made the invention to implement to standard SCSI command emulation onto the McNeill because McNeill teaches one to expand the SCSI connection with a SCSI emulation and McNeill further teaches one to emulate the standard SCSI command in order to establish the connections.

Referring to claim 2: McNeill discloses initializing the target (figure 3, column 5, 1st paragraph), which is the claimed SMP.

Referring to claim 3: Each SCSI control card comes with a driver provided by the vendor for supporting the standard SCSI operations. The SCSI driver provided by the vendor is the vendor specific commands and the parameters associated with the vendor specific commands are the vendor specific data fields. Since both the persistent reservation and persistent affiliation are standard SCSI operations, the SCSI driver provided by the vendor comprises data indicative of at least one of persistent reservation and persistent affiliation.

Referring to claim 4: McNeill's expanding device's connecting means to the bus for communicating with other device is the physical interface.

Referring to claim 5: Exclusive access, such as write, is one of the standard SCSI I/O operations.

Referring to claim 6: The SCSI standard provides the basic mechanism for the dynamic contention resolution in systems (PERSISTENT RESERVE OUT and PERSISTENT RESERVE IN as disclosed in the SCSI Primary Commands); such basic mechanisms are the claimed determining means for the conflict existence.

Referring to claim 7: McNeill discloses a memory (column 5, line 21).

Referring to claim 8: Since power cycle is one of standard SCSI protocol as disclosed in the Specification, one with ordinary skill in the computer art will also implement McNeil's expander device to accommodate the power cycle.

Referring to claim 9: McNeill discloses a SCSI emulation device/target system, which is equivalent to the claimed an expander device, capable of communicating with one or more initiator engines and one or more target storage devices using a plurality of communication protocols (column 3, 3rd paragraph). The SCSI initiator is the claimed circuit card comprising an integrated circuit capable of communicating in accordance with a plurality of different communication protocols.

McNeill discloses emulating the standard SCSI command (column 3, lines 23-27), but McNeil does not explicitly disclose persistent reservation and persistent affiliation. Since the persistent reservation is a standard SCSI command as disclosed in the Specification, one with ordinary skill in the computer art will also implement McNeil's expander device to emulate the

persistent reservation. And since McNeill's emulation device also connects the non-SCSI

devices onto the SCSI network and translates the SCSI commands accordingly, McNeill's

emulated SCSI commands on the non-SCSI devices are equivalent to the claimed persistent

affiliation.

McNeill discloses connecting to non-SCSI device (column 3, line 18), and McNeill

disclose the device as a serial magnetic disk (figure 2), which is equivalent to the claimed SATA

storage.

Hence, it would have been obvious to one having ordinary skill in the computer art at the

time Applicant made the invention to implement to standard SCSI command emulation onto the

McNeill because McNeill teaches one to expand the SCSI connection with a SCSI emulation and

McNeill further teaches one to emulate the standard SCSI command in order to establish the

connections.

Referring to claim 10: McNeill discloses initializing the target (figure 3, column 5, 1st

paragraph), which is the claimed SMP.

Referring to claim 11: Each SCSI control card comes with a driver provided by the

vendor for supporting the standard SCSI operations. The SCSI driver provided by the vendor is

the vendor specific commands and the parameters associated with the vendor specific commands

are the vendor specific data fields. Since both the persistent reservation and persistent affiliation

are standard SCSI operations, the SCSI driver provided by the vendor comprises data indicative

of at least one of persistent reservation and persistent affiliation.

Referring to claim 12: McNeill's expanding device's connecting means to the bus for

communicating with other device is the physical interface.

Referring to claim 13: Exclusive access, such as write, is one of the standard SCSI I/O operations.

Referring to claim 14: The SCSI standard provides the basic mechanism for the dynamic contention resolution in systems (PERSISTENT RESERVE OUT and PERSISTENT RESERVE IN as disclosed in the SCSI Primary Commands); such basic mechanisms are the claimed determining means for the conflict existence.

Referring to claim 15: McNeill discloses a memory (column 5, line 21).

Referring to claim 16: Since power cycle is one of standard SCSI protocol as disclosed in the Specification, one with ordinary skill in the computer art will also implement McNeil's expander device to accommodate the power cycle.

Referring to claim 17:  McNeill discloses a SCSI emulation device/target system, which is equivalent to the claimed an expander device, capable of communicating with one or more initiator engines and one or more target storage devices using a plurality of communication protocols (column 3, 3<sup>rd</sup> paragraph).  McNeill discloses a memory (column 5, line 21) to support emulation, which is the claimed storage medium.

McNeill discloses emulating the standard SCSI command (column 3, lines 23-27), but McNeil does not explicitly disclose persistent reservation and persistent affiliation.  Since the persistent reservation is a standard SCSI command as disclosed in the Specification, one with ordinary skill in the computer art will also implement McNeil's expander device to emulate the persistent reservation.  And since McNeill's emulation device also connects the non-SCSI devices onto the SCSI network and translates the SCSI commands accordingly, McNeill's

emulated SCSI commands on the non-SCSI devices are equivalent to the claimed persistent affiliation.

McNeill discloses connecting to non-SCSI device (column 3, line 18), and McNeill disclose the device as a serial magnetic disk (figure 2), which is equivalent to the claimed SATA storage.

Hence, it would have been obvious to one having ordinary skill in the computer art at the time Applicant made the invention to implement to standard SCSI command emulation onto the McNeill because McNeill teaches one to expand the SCSI connection with a SCSI emulation and McNeill further teaches one to emulate the standard SCSI command in order to establish the connections.

Referring to claim 18: McNeill discloses initializing the target (figure 3, column 5, 1st paragraph), which is the claimed SMP.

Referring to claims 19-20: Each SCSI control card comes with a driver provided by the vendor for supporting the standard SCSI operations. The SCSI driver provided by the vendor is the vendor specific commands and the parameters associated with the vendor specific commands are the vendor specific data fields. Since both the persistent reservation and persistent affiliation are standard SCSI operations, the SCSI driver provided by the vendor comprises data indicative of at least one of persistent reservation and persistent affiliation.

Referring to claim 21: The SCSI standard provides the basic mechanism for the dynamic contention resolution in systems (PERSISTENT RESERVE OUT and PERSISTENT RESERVE IN as disclosed in the SCSI Primary Commands); such basic mechanisms are the claimed determining means for the conflict existence.

Referring to claim 22:  McNeill discloses a SCSI emulation device/target system, which is equivalent to the claimed an expander device, capable of communicating with one or more initiator engines and one or more target storage devices using a plurality of communication protocols (column 3, 3$^{rd}$ paragraph).

McNeill discloses emulating the standard SCSI command (column 3, lines 23-27), but McNeil does not explicitly disclose persistent reservation and persistent affiliation.  Since the persistent reservation is a standard SCSI command as disclosed in the Specification, one with ordinary skill in the computer art will also implement McNeil's expander device to emulate the persistent reservation.  And since McNeill's emulation device also connects the non-SCSI devices onto the SCSI network and translates the SCSI commands accordingly, McNeill's emulated SCSI commands on the non-SCSI devices are equivalent to the claimed persistent affiliation.

McNeill discloses connecting to non-SCSI device (column 3, line 18), and McNeill disclose the device as a serial magnetic disk (figure 2), which is equivalent to the claimed SATA storage.

Hence, it would have been obvious to one having ordinary skill in the computer art at the time Applicant made the invention to implement to standard SCSI command emulation onto the McNeill because McNeill teaches one to expand the SCSI connection with a SCSI emulation and McNeill further teaches one to emulate the standard SCSI command in order to establish the connections.

Referring to claim 23: McNeill discloses initializing the target (figure 3, column 5, 1$^{st}$ paragraph), which is the claimed SMP.

Referring to claims 24-25: Each SCSI control card comes with a driver provided by the vendor for supporting the standard SCSI operations. The SCSI driver provided by the vendor is the vendor specific commands and the parameters associated with the vendor specific commands are the vendor specific data fields. Since both the persistent reservation and persistent affiliation are standard SCSI operations, the SCSI driver provided by the vendor comprises data indicative of at least one of persistent reservation and persistent affiliation.

Referring to claim 26: The SCSI standard provides the basic mechanism for the dynamic contention resolution in systems (PERSISTENT RESERVE OUT and PERSISTENT RESERVE IN as disclosed in the SCSI Primary Commands); such basic mechanisms are the claimed determining means for the conflict existence.

Referring to claim 27: McNeill discloses an invention connecting SCSI initiator to a non-SCSI device and to a SCSI device on a non-local bus. Although McNeill does not explicitly disclose an embodiment of a second tier of expanding connection as claimed, it will be understood by those skilled in the art that the foregoing and other changes and details may be made therein without departing from the spirit and scope of the invention (column 8, 2nd paragraph). In addition, an Office Notice is taken on the following: a multi-tier bridging structure in connecting a plurality of devices is well known in the computer art.

*Conclusion*

4.      The prior art made of recorded and not relied upon is considered pertinent to applicant's

disclosure.

U.S. Patent No. 5,748,924 to Llorens et al.: Llorens discloses an adapter to connect a
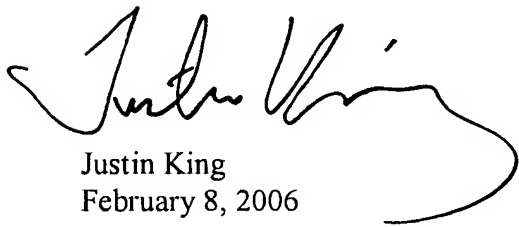
serial device to the SCSI bus.

U.S. Patent No. 6,654,902 to Brunelle et al.: Brunelle teaches a method in handling the

persistent reservation I/O barriers.


5.      Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Justin I. King whose telephone number is 571-272-3628. The

examiner can normally be reached on Monday through Friday, 9:00 am to 5:00 pm. If attempts

to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen

can be reached on 571-272-3676 or on the central telephone number, (571) 272-2100. The fax

phone number for the organization where this application or proceeding is assigned is 571-273-
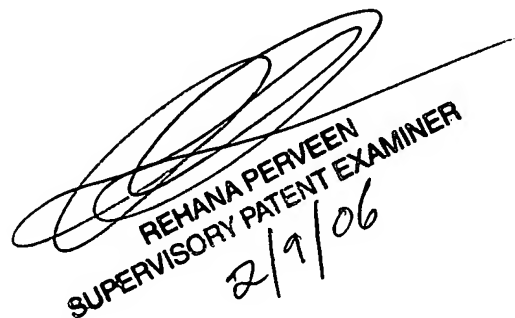
8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lastly, paper copies of cited U.S. patents and U.S. patent application publications will

cease to be mailed to applicants with Office actions as of June 2004. Paper copies of foreign

patents and non-patent literature will continue to be included with office actions. These cited

U.S. patents and patent application publications are available for download via the Office's

PAIR. As an alternate source, all U.S. patents and patent application publications are available

on the USPTO web site (www.uspto.gov), from the Office of Public Records and from

commercial sources. Applicants are referred to the Electronic Business Center (EBC) at

http://www.uspto.gov/ebc/index.html or 1-866-217-9197 for information on this policy. Requests

to restart a period for response due to a missing U.S. patent or patent application publications

will not be granted.

Justin King
February 8, 2006